REMARKS/ARGUMENTS

Claims 11-19, 30-38, 40 and 41 are currently pending. Applicants have amended claims 11, 15, 19, 30, 38, 40, and 41. Claims 42-44 are new. Applicants submit that the amendments have not inserted any new matter into the application.

Reconsideration of the claims in view of the amendments above and the arguments below is respectfully requested.

Priority Claim to Parent Application

In the "Response to Arguments" section of the Office Action, the Examiner has asserted that not all of the limitations of the independent claims are supported by the parent application. Applicants submit that all of the claim limitations in the independent claims are supported by the parent application U.S. Patent Application No. 08/995,616 filed December 22, 1997 for at least the reasons discussed below. Applicants consequently submit that the Acrobat Reader reference (published 1999) and the Hart reference (U.S. U.S. Patent No. 5,546,502 to Hart et. al issued August 13, 1996) are not valid prior art references since the parent application predates these references.

In particular, the Office Action indicates that the Examiner could not find support in the parent application for the following claim language recited in claim 11:

> dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document displayed in the first viewing area;
>
> wherein extracting the contents of the document comprises:
>
> extracting one or more text entities contained in the document;
>
> determining dimension and coordinate information for the one or more text entities;
>
> determining if the one or more text entities are relevant to the first concept, wherein the determination is independent of a user selection of a second concept from the set of concepts; and
>
> associating each text entity that is relevant to the first concept with style information for the first concept, wherein the style information for the first concept indicates a manner of annotating text entities which are relevant to the first concept.

Applicants respectfully submit that support for the above-recited features and for all of the features recited in the pending independent claims can be found in the parent application. Applicants have amended claim 11 to remove the above-recited wherein clause and each of the features that comprise extracting the contents of the document. However, the above-recited wherein clause the above-recited features that comprise extracting the contents of the document have been amended into new dependent claim 42.

Applicants submit the parent application provides support for *"dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document displayed in the first viewing area"* as recited in independent claim 11 in several locations in the parent application. A change in the contents of the document displayed in the first viewing area may mean a change in the actual content of the electronic document and/or a change to the contents of a copy of the document displayed in the first view area. For example, the contents of the document displayed in the first viewing area may change when a user selects a concept and relevant portions of the document displayed in the first viewing area are highlighted to emphasize those portions of the displayed document.

The parent application teaches that the thumbnail image reflects the contents of the document displayed in the first viewing area. The parent application provides several examples where changes may be made to the document displayed in the first viewing area and the changes are dynamically reflected in the thumbnail image.

For example, the parent application discloses accepting of user input indicating user-specific concepts of interest and identifying locations of discussion of those user-specific concepts in a document. See specification, page 5, lines 3-28 and Figs. 2B, 2C, and 2D.. The parent application further describes annotating the locations of discussion of user-specific concepts in the document (displayed in a first viewing area) and displaying the annotations in the thumbnail image corresponding to the document. Accordingly, the locations of discussion of user-specific concepts in the document displayed in a first viewing area are annotated and dynamically the contents of the thumbnail image are also changed to reflect the annotations.

Annotations may comprise color highlighting and/or other highlighting such as bold and/or underlined text and/or marginal notations, and because the annotations are displayed

in the thumbnail image as well as the document, it is easy for a user to fine relevant portions of the document. See specification, page 5, lines 9-28. The processing of the annotations is described in the parent application as preferably being a run-time process, where annotations are not pre-inserted into the text, but are instead generated when the user requests a document for browsing. See specification, page 7, lines 3-6.

As another example, once the user has requested the document for browsing, the user may, adjust the sensitivity controls of the annotation logic. If, for example, the annotation controls are set to a lower sensitivity, the relevant annotations in the document viewed in the first viewing area may be updated to indicate more areas of relevance in the document. The annotations are also reflected in the thumbnail image. See specification, page 4, lines 18-28, and page 12, lines 6-19.

As another example, the user may select a word or phrase in the document to as being relevant to a particular concept. As a result, a Bayesian belief network used to determine relevant portions of the document may be updated. As a result, the annotations to the document viewed in the first viewing area may also be updated and these updated annotations are reflected in the thumbnail image. See specification, page 9, lines 1-24, and page 12, lines 6-19, and Figs. 8, 9A and 9B.

Because the thumbnail image is configured to display the annotations in order to enable a user to quickly find relevant locations in the document, the annotation in the thumbnail image must also be updated in order to keep the thumbnail image in synch with the document in the first viewing area. Otherwise, if only the annotations in the document were updated, the thumbnail image would no longer correspond to the contents of the document and would no longer be useful for quickly finding relevant portions of the document. Accordingly, the parent application provides support for dynamically updating the contents of the thumbnail image in response to a change in the contents of the document as recited in claim 11.

Applicants further submit that the parent application also provides support for *"extracting one or more text entities contained in the document"* as recited in claim 11. Applicants submit that the parent application describes a text processing stage that parses the text of a document and passes the parsed text to pattern identification stage that looks for particular

patterns in the text of a document. See specification, page 7, line 14 - page 8, line 10, and Figs. 6A, 6b, and 6C. The patterns identified in the document are then used by an annotation agent to add annotation tags to the text of the document. See specification, page 6, line 26 - page 7, line2, page 7, line 25 - page 8, line 5 and Figs. 5 and 6B. Accordingly, Applicants submit that the parent application provides support for this feature of claim 11.

Applicants also submit that the parent application provides support for *"determining dimension and coordinate information for the one or more text entities"* as recited in independent claim 11. The parent application discloses that the first viewing area and the thumbnail image are annotated to highlight portions of the document that are relevant to one or more concepts. See specification, page 5, lines 9-28, page 12, lines 6-19, and Figs. 2B-2C. In order to do this, the locations of the text entities within the document must be known in order for the entities relevant to the user concept may be highlighted. See also Fig. 10, which show that portions of the document are identified and tagged. Therefore, Applicants submit that the parent application provides support for this element of claim 11.

Applicants further submit that the parent application provides support for *"determining if the one or more text entities are relevant to the first concept, wherein the determination is independent of a user selection of a second concept from the set of concepts"* as recited in claim 11. As disclosed in the parent application, a user may select one or more concepts, and the relevance of the document to each selected concept is displayed. See for example, Fig. 2C of the parent application wherein multiple concepts have been selected (indicated by a tick mark) and the relevance of the document to each of the selected concepts is independently displayed (displayed as a percentage for each concept). Accordingly, the document is checked for its relevance to each concept independently. The parent application discloses that for each concept, keywords and phrases relevant to that concept may be defined and/or modified during use of the annotation system. See specification, page 8, lines 11-15, and page 9, lines 5-24, and Figs. 9A and 9B. For example, the parent application describes the use of Bayesian belief networks, which associate a user-specified concept of interest to one or more keywords or phrases that may be used to identify portions of the document relevant to the particular user-specified concept. See specification, page 7, lines 7-13, and page 8, lines 16-25.

The parent application further discloses a pattern identification stage that locates relevant discussion of a concept based upon the keywords and key phrases of interest defined for the concept. The pattern identification stage uses these Bayesian belief networks to identify portions of the document that are relevant to each of the user-specified concepts. If one or more of the keywords or key phrases associated with a user-specified concept are identified in a section of the document, then that section of the of document is flagged as relevant to that user-specified concept. See specification, page 5, lines 5-28, and see also Fig. 10, which show that portions of the document are identified and tagged. Thus, the determination as to the relevance of a particular section of the document to a particular user-specified concept is independent for each user-specified concept, since the relevance determination is based upon the keywords and key phrases associated with each user-specified concept.

Applicants further submit that the parent application provides support for *"associating each text entity that is relevant to the first concept with style information for the first concept, wherein the style information for the first concept indicates a manner of annotating text entities which are relevant to the first concept"* as recited in independent claim 11. Applicants submit that the parent application provides for annotating concepts of interest with various styles of annotation, such as highlighting using bold, underlined, and/or colored text. Other styles of annotation such as marginal annotations and/or the use of balloons that appear when a user selects a keyword or key phrase with a mouse may also be used in some embodiments. See specification, page 5, lines 9-28. Accordingly, Applicants submit that the parent application provides support for associating each text entity with style information as the parent describe associating one or more of the annotation styles described with portions of the document relevant to a user concept in order to highlight these relevant portions of the document so that a user may readily identify portions of the document that may be of interest.

Therefore, Applicants submit that each of the features recited in independent claim 11 is fully supported by the parent application. Applicants further submit that independent claims 19, 30, 38, 40 and 41 are also fully supported by the parent application for at least the same rationale as for claim 11.

Accordingly, Applicants submit that the Acrobat Reader reference and the Hart reference are not valid references for at least independent claims 11, 19, 30, 38, 40 and 41, because the parent application predates both Acrobat Reader and Hart.

Rejections under 35 U.S.C. 103

Claims 11-15, 17-19, 30-34, 36-38, and 40-41

Claims 11-15, 17-19, 30-34, 36-38, and 40-41 stand rejected under 35 U.S.C. §103 as being unpatentable over Adobe Acrobat Reader, published 1999 (hereinafter "Acrobat Reader") in view of U.S. Patent No. 6,339,437 to Nielsen et al. (hereinafter "Nielsen") and in further view of U.S. Patent No. 5,546,502 to Hart et. al (hereinafter "Hart").

Applicants submit even if the pending claims were not fully supported by the parent application (which they are), the cited references fail to teach each of the features recited in the pending independent claims.

For example, claim 11, as amended, recites, in part "dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document in the first viewing area" (emphasis added).

The Office Action admits on page 10, first paragraph that Acrobat Reader does not teach "dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document" as recited in independent claim 11. The Office Action however asserts that U.S. Patent No. 6,326,957 to Nathan et al. (hereinafter "Nathan") teaches this feature of claim 11. Applicants respectfully disagree.

Applicants submit that Nathan merely discloses systems and methods for displaying page information in a handwriting recording device such as a personal digital notepad ("PDN") device. See Nathan, Abstract. The Office Action relies upon the "dynamic icons" disclosed in Nathan to teach "dynamically changing the contents of the single thumbnail image" feature recited in claim 11. However, Applicants submit that the "dynamic icons" described in Nathan do not dynamically change their contents "to reflect a change in the contents of the document in the first viewing area" as recited in claim 11.

Applicants submit that the thumbnail images in Nathan represent a page of handwritten text that has been captured by a PDN device. The PDN device includes a small LCD panel embedded in the device that can be used to display a thumbnail image that is a rough approximation of the ink structure from a page of digitally captured handwriting. When a user switches the PDN device to thumbnail display mode, a thumbnail image representing a page of captured handwriting stored in the memory of the PDN is displayed on the LCD panel. The thumbnail image is generated from recorded positional data representing "digital ink" for a selected page of handwriting stored in memory. See Nathan, col. 5, lines 37-50. The PDN device may store multiple pages of handwriting, and the user may browse through these pages in memory. When the user selects the next page stored in memory, the thumbnail image is updated to display a rough approximation of the next page of handwriting stored in memory.

Applicants submit that Nathan fails to teach or suggest at least "dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document in the first viewing area" as recited in claim 11. The "dynamic icon" described in Nathan is not updated in response to a change in the contents of a document "in the first viewing area" as recited in claim 11. As described above, the dynamic icon is merely a representation of a set of static pre-recorded positional data (col. 5, line 43) representing a page of handwritten text stored in the memory of the PDN device, and when the user select another page of handwritten text stored in the PDN device's memory, the icon is updated to display a rough approximation of the ink structure of the newly selected page. The display capability of the PDN device in Nathan is limited to the small LCD panel described above that is used to display the dynamic icons, and Nathan does not provide a means for displaying the contents of the handwritten document in a first viewing area. Accordingly, the contents of the "dynamic icons" described in Nathan are not dynamically changed to reflect a change in the contents of a document in a first viewing area as recited in claim 11. Therefore, Applicants submit that Nathan fails to teach or suggest at least this limitation of claim 11.

Applicants submit that the deficiencies of Nathan are not cured by Acrobat Reader, Nielsen and Hart are not cured by Nathan. Accordingly, even if the Examiner were to combine Nathan with Acrobat Reader, Nielsen and Hart, the combination would still fail to teach

each element of the claim 11. Therefore, Applicants respectfully request that the rejection of claim 11 be withdrawn. Furthermore, dependent claims 12-18 are also in condition for allowance at least due to their dependence from independent claim 11.

Applicants further submit that independent claims 19, 30, 38, 40 and 41 are also allowable for the same rationale as claim 11, and others. Furthermore, dependent claims 31-37, which depend from independent claim 30 are also allowable at least due to their dependence from claim 30.

Claims 16 and 35

Claims 16 and 35 stand rejected under 35 U.S.C. §103 as being unpatentable over Adobe Acrobat Reader in view of Nielsen and further in view of Hart, and further in view of U.S. Patent Application Publication No. 2002/0065814 to Okamoto (hereinafter "Okamoto").

As demonstrated above, the pending claims are fully supported by the parent application which predates the Acrobat Reader, Hart, and Okamoto references. Accordingly, the rejections based upon these references should be withdrawn.

Furthermore, Applicants submit that even if Acrobat Reader, Hart, and Okamoto were considered to be proper references, claims 16 and 35 that depend either directly or indirectly from amended independent claims 11 and 30, are not taught or suggested by the combination of Acrobat Reader, Nielsen, Hart and Okamoto.

As demonstrated above, Acrobat Reader, Nielsen, and Hart, either alone, or in combination, fail to suggest or disclose at least "dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document displayed in the first viewing area" as variously recited in claims 11 and 30 (emphasis added). Applicants submit that the deficiencies of Acrobat Reader, Nielsen, and Hart are not cured by Okamoto.

Applicants submit that Okamoto merely discloses a method and system for displaying a structured document. A query input is received and analyzed, and documents matching the query results are returned. The documents are displayed and portions of the document that include the search terms provided in the query input are highlighted. See Okamoto, Abstract.

Applicants submit, however, that Okamoto, like Acrobat Reader, Nielsen, and Hart, is also silent as to "dynamically changing the contents of the single thumbnail image to reflect a change in the contents of the document in the first viewing area" as recited in claim 11 (emphasis added). Okamoto does not provide a thumbnail image, much less one that is dynamically updated to reflect a change in the structured document. Accordingly, even if Okamoto is combined with Acrobat Reader, Nielsen, and Hart, as suggested by the Examiner, the combination still fails to disclose or suggest each of the features recited in claim 11.

Furthermore, Applicants have also demonstrated above that Nathan fails to teach this feature of claim 11. Therefore, even if the Examiner were to cite Nathan in combination with Acrobat Reader, Nielsen, Hart, and Okamoto, the combination would still fail to suggest or disclose all of the feature recited in claim 11. Accordingly, Applicants submit that claim 16 is in condition for allowance at least due to its dependence from claim 11.

Applicants further submit that claim 30 is also allowable for at least the same rationale as claim 11. Therefore, dependent claim 35 is also in condition for allowance at least due to its dependence from independent claim 30.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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